

# SEARCH REQUEST FORM

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Access DB# 49768

Requester's Full Name: Donald T. Carcino Examiner #: 73088 Date: Aug 28, 2001  
 Art Unit: 1773 Phone Number 308 2379 Serial Number: 03  
 Mail Box and Bldg/Room Location: 11808 Results Format Preferred (circle) PAPER DISK E-MAIL  
03

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

*Litigation*  
*Search*  
*08/801, 047 Pat 6,054,198*

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>K. Fuller</u>	NA Sequence (#) _____	STN _____
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*Lepie*

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FILES - PAGE 1 of 7 (NEXT PAGE for additional files)

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<---CASES & ADMINISTRATIVE DECISIONS---> <-----PATENTS GROUP FILES----->

IPOMNI 1 Int Prop Cases & Reg Matl

ALL 4 UTIL, DESIGN, PLANT, SIR,

PTOMNI 1 FEDCTS, PTO, ITC, ALLREG

REEXAM & REISS

CASES 1 FEDCTS, PTO & ITC

ALLPAT 4 Comb. ALL & INTPAT

FEDCTS 2 Patent cases from Fed. Cts.

<-----U.S. PATENTS----->

CCPA 2 Ct Customs & Patent Appeals

UTIL 4 Full Text Patents from 1971\*

CAFC 2 Patent cases from Fed. Cir.

DESIGN 4 Full Text Patents from 1976

PTO 2 PATAPP & COMMR

PLANT 4 Full Text Patents from 1976

<-----SECONDARY SOURCES----->

USPGP 4 Pre-Grant Pubs. from 3/01

IPLTR 5 Intell Prop Law Nwltrs

IPLR 5 Intell Prop Law Rev Articles

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*Searched these databases - no  
litigation found only issue application*

LEVEL 1 - 1 OF 1 PATENT

&lt;6,054,198&gt;

&lt;=&gt; GET 1st DRAWING SHEET OF 1

Apr. 25, 2000

Conformal thermal interface material for electronic  
componentsREISSUE: Reissue Application filed Nov. 16, 2000 (O.G. Mar. 27, 2001) Ex. Gp.:  
1773; Re. S.N. 09/714,680INVENTOR: Bunyan, Michael H., Chelmsford, Massachusetts  
de Sorgo, Miksa, Windham, New Hampshire

ASSIGNEE-AT-ISSUE: Parker-Hannifin Corporation, Cleveland, Ohio (02)

APPL-NO: 801,047

FILED: Feb. 14, 1997  
>>>

Pat. No. 6054198, \*

REL-US-DATA:

Provisional Application No. 60-016,488, Apr. 29, 1996

INT-CL: [7] C09K 5#00

US-CL: 428#40.5; 428#41.3; 428#41.8; 428#220; 428#348; 428#349; 428#515;  
156#247; 156#306.6; 156#324.4; 165#185; 252#74; 361#700; 361#713; 361#704;  
257#714; 524#399; 524#400; 524#404; 524#428; 524#489; 525#220; 525#240

CL: 428;156;165;252;361;257;524;525

SEARCH-FLD: 165#185, DIG.44; 525#221, 222, 240; 524#404, 428, 489, 400, 394;  
428#41.3, 40.4, 41.7, 41.8, 214, 348, 515, 488, 488.4, 220, 349; 257#714;  
361#704, 713, 700, 706; 156#247, 306.6, 324.4

REF-CITED:

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3,332,055	7/1967	*	Bogner	439#88
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&gt;&gt;&gt;

Pat. No. 6054198, \*

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KATHLEEN FULLER EIC1700 308-4290

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Pat. No. 6054198, \*

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>>>

Pat. No. 6054198, \*

IBM Technical Disclosure Bulletin, vol. 23, No. 6, dated Nov. 1980.  
 IBM Technical Disclosure Bulletin, vol. 27, No. 7A, dated Dec. 1984.  
 Aldrich Chemical Catalog, Milwaukee, Wi, p. T330, 1994.

PRIM-EXMR: Thibodeau, Paul

ASST-EXMR: Tarazano, D. Lawrence

LEGAL-REP: Molnar, Jr.; John A.

CORE TERMS: interface, thermal, electronic, heat, thermally-conductive, phase, filler, interlayer, dissipation, layer, wax, film, sheet, nitride, form-stable, sink, self-supporting, room temperature, boron, blend, transition temperature, mixture, tape, aluminum oxide, heat-generating, adjacency, cooling, melting, grease, melt

#### ABST:

A thermally-conductive interface for conductively cooling a heat-generating electronic component having an associated thermal dissipation member such as a heat sink. The interface is formed as a self-supporting layer of a thermally-conductive material which is form-stable at normal room temperature

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Pat. No. 6054198, \*

in a first phase and substantially conformable in a second phase to the interface surfaces of the electronic component and thermal dissipation member. The material has a transition temperature from the first phase to the second phase which is within the operating temperature range of the electronic component.

NO-OF-CLAIMS: 19

EXMPL-CLAIM: <=> 3 >> 1

NO-OF-FIGURES: 4

NO-DRWNG-PP: 1

PARCASE: This application claims the benefit of U.S. Provisional Application No.: 60/016,488 filing date Apr. 29, 1996.

SUM:

BACKGROUND OF THE INVENTION

PLUSPAT - (c) Questel-Orbit, All Rights Reserved.

Comprehensive Worldwide Patents database

More information: see INFO PLUSPAT, Pricing: see INFO NEW-PLUSPAT

Note: Weekly updates for April consolidated into 2001-14/UP

Last database update : 2001/08/24 (YYYY/MM/DD) 2001-33/UP (basic update)

Search statement 4

?/pn us6054198

\*\* SS 4: Results 1

Search statement 5

?prt max legalall

1/1 PLUSPAT - (C) QUESTEL-ORBIT

PN - US6054198 A 20000425 [US6054198]

TI - (A) Conformal thermal interface material for electronic components

PA - (A) PARKER HANNIFIN CORP (US)

IN - (A) DE SORGO MIKSA (US); BUNYAN MICHAEL H (US)

AP - US80104797 19970214 [1997US-0801047]

PR - US80104797 19970214 [1997US-0801047]

- US1648896P 19960429 [1996US-P016488]

IC - (A) C09K-005/00

EC - C09K-005/06B

PCL - ORIGINAL (O) : 428040500; CROSS-REFERENCE (X) : 156247000 156306600

156324400 165185000 252074000 257714000 361700000 361704000

361713000 428041300 428041800 428220000 428348000 428349000

428515000 524399000 524400000 524404000 524428000 524489000

525220000 525240000

DT - Basic

CT - US2311526; US3332055; US3609104; US4299715; US4384610; US4389340;

US4466483; US4473113; US4487856; US4533685; US4546411; US4561011;

US4575432; US4722960; US4755249; US4764845; US4782893; US4855002;

US4869954; US4915167; US4965699; US4974119; US4979074; US5052481;

US5137959; US5194480; US5213868; US5298791; US5302344; US5321882;

US5352731; US5602221; US5770318; US5796582; US5798171

- Advances in Electronic Packaging 1995. Proceedings of the International Intersociety Electronic Packaging Conference--Interpack '95, vol. 2, 1995.

IBM Technical Disclosure Bulletin, vol. 25, No. 11A, Apr. 1983.

Electronic Packaging and Production, vol. 35, No. 10, Sep. 1, 1995.

IBM Technical Disclosure Bulletin, vol. 35, No. 7, Dec. 1, 1992.

IBM Technical Disclosure Bulletin, vol. 24, No. 12, May 1982.

IBM Technical Disclosure Bulletin, vol. 23, No. 6, dated Nov. 1980.

IBM Technical Disclosure Bulletin, vol. 27, No. 7A, dated Dec. 1984.

Aldrich Chemical Catalog, Milwaukee, Wi, p. T330, 1994.

STG - (A) United States patent

AB - A thermally-conductive interface for conductively cooling a heat-generating electronic component having an associated thermal dissipation member such as a heat sink. The interface is formed as a self-supporting layer of a thermally-conductive material which is

form-stable at normal room temperature in a first phase and substantially conformable in a second phase to the interface surfaces of the electronic component and thermal dissipation member. The material has a transition temperature from the first phase to the second phase which is within the operating temperature range of the electronic component.

UP - 2000-17

1/1 LGST - (C) LEGSTAT

PN - US 6054198 [US6054198]

AP - US 801047/97 19970214 [1997US-0801047]

DT - US-P

ACT - 19970214 US/AE-A

APPLICATION DATA (PATENT)

{US 801047/97 19970214 [1997US-0801047]}

- 20000425 US/A

PATENT

- 20010327 US/RF

REISSUE APPLICATION FILED

20001116

UP - 2001-16

1/1 CRXX - (C) CLAIMS/RRX

PN - 6,054,198 A 20000425 [US6054198]

PA - Parker-Hannifin Corp

ACT - 20001116 REISSUE REQUESTED

ISSUE DATE OF O.G.: 20010327

REISSUE REQUEST NUMBER: 09/714680

EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 1773

Reissue Patent Number:

1/1 PAST - (C) PAST

AN - 200113-001563

PN - 6054198 A [US6054198]

OG - 2001-03-27

ACT - REISSUE APPLICATION FILED

Search statement 5

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PLUSPAT - Time in minutes : 0,65

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Cost estimated for the last database search :	0.67 USD
Estimated total session cost :	4.53 USD

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CRXX - Time in minutes : 0,08  
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Estimated total session cost :	9.15 USD

PAST - Time in minutes : 0,08  
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Estimated cost :	0.14 USD
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LITA - Time in minutes : 0,03  
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Search statement 1

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ER 977

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Search statement 1

?fam us6054198/pn

1 Patent Groups  
\*\* SS 1: Results 6

Search statement 2

?famstat legall

1/6 INPADOC - (C) INPADOC  
PN - AU 723258 B2 20000824 [AU-723258]  
TI - CONFORMAL THERMAL INTERFACE MATERIAL FOR ELECTRONIC COMPONENTS  
IN - BUNYAN MICHAEL H; SORGO MIKSA DE  
PA - PARKER HANNIFIN CORP  
AP - AU 18077/97-A 19970214 [1997AU-0018077]  
PR - WO 9700223/97(IB)-W 19970214 [1997WO-IB00223]  
- US 16488/96-P 19960429 [1996US-P016488]  
IC - H01L-023/373; C09K-005/06

2/6 INPADOC - (C) INPADOC  
PN - AU 18077/97 A1 19971119 [AU9718077]  
TI - CONFORMAL THERMAL INTERFACE MATERIAL FOR ELECTRONIC COMPONENTS  
IN - BUNYAN MICHAEL H; SORGO MIKSA DE  
PA - PARKER HANNIFIN CORP



AP - AU 18077/97-A 19970214 [1997AU-0018077]  
PR - WO 9700223/97(IB)-W 19970214 [1997WO-IB00223]  
- US 16488/96-P 19960429 [1996US-P016488]  
IC - H01L-023/373; C09K-005/06

3/6 INPADOC - (C) INPADOC

PN - EP 956590 A1 19991117 [EP-956590]  
TI - CONFORMAL THERMAL INTERFACE MATERIAL FOR ELECTRONIC COMPONENTS  
LA - ENG  
IN - BUNYAN MICHAEL H [US]; DE SORGO MIKSA [US]  
PA - PARKER HANNIFIN CORP [US]  
AP - EP 97903552/97-A 19970214 [1997EP-0903552]  
PR - WO 9700223/97(IB)-W 19970214 [1997WO-IB00223]  
- US 16488/96-P 19960429 [1996US-P016488]  
IC - H01L-023/373; C09K-005/06  
DS - BE\* DE\* DK\* ES\* FI\* FR\* GB\* IE\* IT\* SE\*

ER 6

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4/6 INPADOC - (C) INPADOC

PN - JP 2000509209 T2 20000718 [JP2000509209]  
AP - JP 538684/97-A 19970214 [1997JP-0538684]  
PR - WO 9700223/97(IB)-W 19970214 [1997WO-IB00223]  
- US 16488/96-P 19960429 [1996US-P016488]  
IC - H01L-023/36

5/6 INPADOC - (C) INPADOC

PN - US 6054198 A 20000425 [US6054198]  
TI - CONFORMAL THERMAL INTERFACE MATERIAL FOR ELECTRONIC COMPONENTS  
IN - BUNYAN MICHAEL H [US]; DE SORGO MIKSA [US]  
PA - PARKER HANNIFIN CORP [US]  
AP - US 801047/97-A 19970214 [1997US-0801047]  
PR - US 801047/97-A 19970214 [1997US-0801047]  
- US 16488/96-P 19960429 [1996US-P016488]  
IC - C09K-005/00

ER 6

LEGA

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6/6 INPADOC - (C) INPADOC

PN - WO 9741599 A1 19971106 [WO9741599]  
TI - CONFORMAL THERMAL INTERFACE MATERIAL FOR ELECTRONIC COMPONENTS  
LA - ENG  
IN - BUNYAN MICHAEL H; DE SORGO MIKSA  
PA - PARKER HANNIFIN CORP [US]  
AP - WO 9700223/97(IB)-A 19970214 [1997WO-IB00223]  
PR - US 16488/96-P 19960429 [1996US-P016488]  
IC - H01L-023/373; C09K-005/06  
DS - AU\* JP\* SG\* AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

ER 6

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Search statement 2